



Fish & Benthic Monitoring Update on Guam

From June 23 to July 3rd, 2014, the Pacific Island Network carried out the [marine benthic](#), [fish](#), and marine [water quality](#) protocols for [War in the Pacific National Historical Park](#) (WAPA), Guam. A dive team consisting of Sly Lee (NPS Biotech), Eric Brown (NPS Marine ecologist), and I surveyed 30 sites across the park units of Asan and Agat. At the end of our field sampling, a total of 30 reef structural complexity measurements, 750 underwater benthic photo images, and 96 marine water samples were taken; with 1,682 fishes counted and sized. Data entry, and sampling and image analyses are now underway.

We observed seven fish species that had never before been seen during Inventory & Monitoring Program sampling....



Spotfin lionfish
(*Pterois antennata*)



Pink anemonefish
(*Amphiprion perideraion*)

the pink anemonefish (*Amphiprion perideraion*), the spiny tooth parrotfish (*Calotomus spinidens*), the striated surgeonfish (*Ctenochaetus striatus*), the greasy grouper (*Epinephelus tauvina*), the spotfin lionfish (*Pterois antennata*), the globe head parrotfish (*Scarus globiceps*), and the tasseled scorpionfish (*Scorpaenopsis oxycephala*).

Our observations of the benthic community ranged from reef sites with a healthy amount of coral cover to that of an unhealthy reef, where a poorly managed watershed (pictured on the right) resulted in runoff; containing sediments and other pollutants that killed the living coral.



Coralline lethal orange disease "CLOD" forms a distinctive orange band



Healthy coral cover



Unhealthy reef

Benthic organisms can also become sick or infected with diseases and coralline algae is no exception. Unfortunately, coralline lethal orange disease or "CLOD" was observed on two occasions. CLOD is a bacterial disease and, as the name implies, is characterized by a band of bright orange. Normally healthy live coralline algae are pink to magenta in color. The band infects the algae as it moves across the surface, the bare white or dead portion is what remains.

We'll look for these species and issues, and make other observations when we return for monitoring in 2015. —Sheila A. McKenna, NPS Marine ecologist